



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,526	09/15/2006	Hiromitsu Takeda	128866	8910
25944	7590	12/30/2010	EXAMINER	
OLIFF & BERRIDGE, PLC	P.O. BOX 320850	ALEXANDRIA, VA 22320-4850	OLSON, ERIC	
			ART UNIT	PAPER NUMBER
			1623	
		NOTIFICATION DATE	DELIVERY MODE	
		12/30/2010	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction25944@oliff.com  
jarmstrong@oliff.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/587,526	<b>Applicant(s)</b> TAKEDA ET AL.
	<b>Examiner</b> ERIC S. OLSON	<b>Art Unit</b> 1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 26 October 2010.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
  - 4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 9-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-215)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

**Detailed Action**

This office action is a response to applicant's communication submitted October 26, 2010 wherein claims 1, 9, and 12 are amended. This application is a national stage application of PCT/JP05/00995, filed January 26, 2010, which claims priority to foreign application JP2004-024894, filed January 30, 2004.

Claims 1-14 are pending in this application.

Claims 1-8 are withdrawn from consideration as being directed toward a non-elected invention.

Claims 9-14 as amended are examined on the merits herein.

Applicant's amendment, submitted October 26, 2010, with respect to the objection to claim 9 for depending from a withdrawn base claim, has been fully considered and found to be persuasive to remove the objection as claim 9 has been amended to be an independent claim. Therefore the objection is withdrawn.

Applicant's amendment, submitted October 26, 2010, with respect to the rejection of instant claims 9-14 under 35 USC 112, second paragraph, for including an ambiguous chemical structure, has been fully considered and found to be persuasive to remove the rejection as the structure has been rewritten to clearly define all of the variable groups. Therefore the rejection is withdrawn.

The following new grounds of rejection are introduced:

***Claim Objections***

Claim 9 is objected to because of the following informalities: This claim contains the grammatically incorrect phrase, “side chain composed of a galactose units.” This phrase contains a singular and a plural which contradict each other. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The base claim 9 includes a double product-by-process claim, wherein the claimed composition comprises a galactomannan prepared by a particular process from a particular starting material, wherein the starting material was purified from a particular crude galactomannan starting material. The claim then immediately recites, "comprising a main chain composed of mannose units and a side chain composed of a galactose units, and containing 80 wt% galactomannan."

There are three different materials referenced in this claim, the cation-modified galactomannan which is the actual subject of the claim, the purified galactomannan which is used as a starting material in the cationization reaction, and the crude galactomannan-containing mixture from which the purified galactomannan is isolated. It

is unclear from the structure of the claim which of these materials this proviso is supposed to apply to. Otherwise the limitation could also be taken as requiring that exactly 80% of the molecular mass of the galactomannan polysaccharide be galactose and mannose residues, with the other 20% being derived from the atoms of other saccharide residues or the cationic side chains. Note that if the limitation applies to the second or third material it does not actually limit the scope of the claim as these starting materials are not part of the claimed subject matter but rather hypothetical precursors from which the claimed material could have been made.

The following rejections of record in the previous office action are maintained:

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then

narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigwald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 12 recites the broad recitation "a neutralizing agent," and the claim also recites "of an organic acid and/or an inorganic acid" which is the narrower statement of the range/limitation.

Response to Arguments: Applicant's amendment, submitted October 24, 2010, with respect to the above grounds of rejection, has been fully considered and not found to be persuasive to remove the rejection. The amendment removes the phrase, "such as," but introduces the phrase, "a neutralizing agent of an organic acid," which does not make any sense. It is still unclear what the relationship between the neutralizing agent and the organic acid is, for example whether the neutralizing agent is an organic acid or whether it is capable of neutralizing an organic acid. Therefore the rejection is maintained.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Takeda et al. (Foreign patent application JP2003-327603, reference and translation submitted with PTO-1449)

Takeda et al. discloses a cosmetic composition for hair comprising a galactomannan polymer having a 3:1 galactose:mannose ratio into which a cationic side chain has been introduced. (column 3 paragraph 0006) The galactomannan polymer is obtained from the Tara (*Caesalpinia Spinosa*) which is the same polysaccharide recited in the limitations of instant claim 1. ( column 3 paragraph 0007) The cationic side chain used in these polymers is a quaternary ammonium side chain that is the same as the structure recited in instant claim 1 and incorporated in claim 9, wherein n is 0. (column 4 paragraphs 0011-0012) The polymer has a charge density of 0.1-3 meq/g. (column 4 paragraph 0013) The cationic polymer is preferably present at between 0.1-5% of the weight of the composition. (column 5 paragraph 0014) Additional agents that can be added to the composition include a long chain (8-24 carbon) carboxylate, which is a fatty acid according to claim 12. (columns 5-6 paragraph 0017) According to claim 6 of Takeda et al., the composition can also comprise a cationic polymer at 0.5-5 wt%. The composition can also comprise a silicone, a higher alcohol, a higher fatty acid, and a sequestering agent including edta. (column 8 paragraph 0025) Therefore Takeda et al. anticipates the claimed invention.

Response to Arguments: Applicant's arguments, submitted October 24, 2010, with respect to the above grounds of rejection, have been fully considered and not found to be persuasive to remove the rejection. Applicant argues that the claims as

written require that the polysaccharide contain 80 wt% of galactomannan. However, as discussed above this limitation is so vague and indefinite that it is not possible to determine what part of the claim it applies to. In such a case the claim is given its broadest reasonable interpretation. In the instant situation, the broadest reasonable interpretation is that this limitation applies not to the claimed material itself but to the hypothetical starting material mentioned in the product-by-process claim. In such a case, the claim reads on any product which could have been produced by the claimed process, regardless of whether the prior art specifically recites such a process. Therefore the rejection is deemed proper and maintained.

### **Conclusion**

No claims are allowed in this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC S. OLSON whose telephone number is (571)272-9051. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia Anna Jiang can be reached on (571)272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric S Olson/  
Primary Examiner, Art Unit 1623  
12/22/2010